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Human Environment of the Mind: Correcting NEPA Implementation by Treating Environmental Philosophy and Environmental Risk Allocation as Environmental Values under NEPA

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The Human Environment of the Mind: Correcting NEPA Implementation by Treating Environmental Philosophy and Environmental Risk Allocation as Environmental Values Under NEPA

by
VICTOR B. FLATT*

I. Introduction

"[A]ll agencies of the Federal Government shall . . . include in every recommendation or report on proposals for . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement . . . on the environmental impact of the proposed action . . . ."[1]

—*United States Code*

"And why are you anxious about clothing? Consider the lilies of the field; they do not toil nor do they spin, yet I say to you that even Solomon in all his glory did not clothe himself like one of these."[2]

—*Matthew* 6:28-29

Should an agent of the federal government, about to build a new suburban federal office complex, consider the lilies in the field that would be destroyed by such action? After all, one can hardly call the plowing under of one field of lilies a significant impact on the environment.

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1. National Environmental Policy Act of 1969, Pub. L. No. 91-190, § 83 Stat. 852 (1970) (codified as 42 U.S.C. § 4332 (2)(C)(i) (1988)).

2. *Matthew* 6:28-29

But what if the lilies in the field were more than plants or a nice smell or a pretty picture? What if they were an earthly symbol of divine care and protection?

How does NEPA[3] treat philosophical values tied to the environment? It has not done much heretofore, leading to the statute's very checkered and litigious history.[4] Complaints about delays and costs under NEPA are commonplace.[5] The effect and use of NEPA on large federal sales and projects (such as timber sales and dam flow-throughs) has recently been much debated and criticized.[6] Addressing these concerns requires a new way of thinking about NEPA. However, this new way of thinking does not require a revision of the statute itself, but in how it is interpreted and implemented. While, pursuant to NEPA, governmental decision makers must consider significant impacts on the environment in their decision-making process, these decision makers have generally not considered the impact that projects may have on the environmental values which are most important to our society. Specifically, governmental decision-makers have failed to consider what I will refer to as environmental philosophy and environmental risk allocation. Primarily, this failure has resulted from an institutional reluctance to recognize environmental philosophy and environmental risk allocation as environmental values that should be considered in the NEPA process.

This Article argues that environmental philosophy and environmental risk allocation are real environmental values (similar to clean air and clean water) that are affected by agency decision making.[7]

3. NEPA stands for the "National Environmental Policy Act." 42 U.S.C. §§ 4321-4347 (1988). In keeping with convention, this Article's reference to NEPA will not usually be preceded by a definite article even if the term "National Environmental Policy Act" itself would be.

4. Patricia M. Wald, *The Bellazio Conference on US-USSR Environmental Protection Institution: The Role of the Judiciary in Environmental Protection*, 19 B.C. ENVTL. AFF. L. REV. 519, 539 (1991).

5. *See, e.g.*, FREDERICK R. ANDERSON ET AL., ENVIRONMENTAL PROTECTION: LAW AND POLICY 887-88 (2d ed. 1990) (noting criticism that NEPA requires "unnecessary paperwork that simply delays or even eliminates useful and beneficial projects" and "self-serving and bulky justifications for projects that agencies plan to undertake whatever the environmental analysis reveals").

6. *See* Idaho Conservation League v. Mumma, 956 F.2d 1508 (9th Cir. 1992) (examining NEPA requirements in specific timber sales); Stark Ackerman, *NEPA's Effect on Agency Decision Making: Article: Observations on the Transformation of the Forest Service: The Effects of the National Environmental Policy Act on U.S. Forest Service Decision Making*, 20 ENVTL. L. 703 (1990).

7. Unlike many scholars, I argue that environmental philosophy can have "value." It may not be a direct value for human exploitation, but it has some value to humans or it would not exist. Moreover, these values may not be easily measurable, but they can still be

Once recognized as environmental values, the legislative mandate of NEPA as interpreted by the federal courts requires an analysis of the impact of a federal action on the values of environmental philosophy and environmental risk allocation.

A NEPA analysis that focuses on environmental philosophy and environmental risk allocation will provide agency decision makers with better information about the true environmental impacts of decisions they undertake. The NEPA process that results should be more efficient, thus, eliminating much delay and cost. By understanding and incorporating these environmental values, the cost benefit analysis undertaken by agency decision makers will more accurately reflect the environmental concerns of society, making for both a more honest and more efficient evaluation process. In Part II, I discuss the National Environmental Policy Act generally and specifically examine the definition and scope of its requirement to analyze significant impacts on environmental values. In Parts III and IV, I review literature, philosophy, and environmental laws in order to show that environmental philosophy and environmental risk allocation are environmental values. In Part V, I show that once environmental philosophy and environmental risk allocation are recognized as values, case law requires that they be analyzed in the NEPA process; and in Part VI, I demonstrate why such a recognition would be beneficial from a public policy standpoint. Last, in Part VII, I examine how the incorporation of these values would alter NEPA analysis in a particular case.

II. What Is an Environmental Impact Under NEPA?

Under NEPA, Congress requires all agencies to consider the environmental impact of any federal action that significantly affects the quality of the environment.[8] Federal actions include federally sponsored projects, projects that are federally funded, and private projects that require federal approval or the granting of a federal permit in order to be completed.[9] Presumably, a consideration of the environ-

used in a cost/benefit decision-making context. In *From Plastic Trees to Arrow's Theorem*, 1986 U. ILL. L. REV. 337, 347 (1986) [hereinafter *Plastic Trees*], author Daniel Farber identifies environmental philosophy as an environmental value having weight aside from "human values," although the philosophy must have some "human value" or it would not be held as a philosophy.

8. 42 U.S.C. § 4332(2)(C) (1988).

9. For a discussion of the limits of what constitutes federal action, see William B. Ellis & Turner T. Smith, *The Limits of Federal Responsibility and Control Under the National Environmental Policy Act*, 18 ENVTL. L. 10055 (1988).

mental impacts of a project strengthens the information on environmental costs needed to do a cost benefit analysis of the project.[10]

According to the statute, its accompanying regulations, and interpretive case law, environmental impacts are to be considered through a process of listing and examining the impacts, and then examining alternative actions that may lessen the impacts.[11] In practice, the first step in this process is a preliminary analysis to determine whether significant impacts on the environment are likely to occur from a government action, and thus *whether* a document must be prepared to list and analyze those impacts and consider action alternatives.[12] To accomplish this, an agency will prepare an environmental assessment, which analyzes the possibility of significant environmental impacts.[13]

If, at the preliminary analysis stage, significant impacts on the environment are not indicated, an agency issues a "finding of no significant impact" or a FONSI.[14] Concurrent with the determination of a FONSI, an agency will usually present documentation as to why an impact statement is not necessary in the form of the environmental assessment.[15] The environmental assessment provides evidence of a critical procedural step in the process and also provides evidence for judicial review.

If significant impacts on the environment are indicated, the agency then issues a "notice of intent" and determines the proper scope of impacts to be considered and the level of action alternatives that are to be explored.[16] This process is important because it determines not only the "breadth" of environmental impacts, but also the presumed extent and reach of the project and its connections with other actions. An environmental impact statement must provide sufficient information for a decision maker to consider the environmental impacts of a project; it must also examine alternatives to the action.[17] At this stage, public hearings or opportunities to comment in writing are usually held to include public input into the "scoping document."[18]

After the scope of the impact statement is determined, the agency prepares the "draft environmental impact statement" or DEIS, which

10. ANDERSON ET AL., *supra* note 5, at 869.
11. 42 U.S.C. § 4332(2)(C) and (E) (1988).
12. 40 C.F.R. § 1501.3 (1993).
13. 40 C.F.R. §§ 1501.3, 1508.9 (1993).
14. 40 C.F.R. § 1508.13 (1993).
15. 40 C.F.R. § 1501.4(e) (1993).
16. 40 C.F.R. §§ 1501.7, 1508.22 (1993).
17. 40 C.F.R. § 1502.14-.16 (1993).
18. 40 C.F.R. § 1501.7 (1993).

is published in the Federal Register.[19] Public and other relevant agency comment on the DEIS is then considered and incorporated into the "final environmental impact statement" or FEIS, which is also published in the Federal Register.[20] The agency must consider the FEIS before it takes action on a project. Occasionally, because of the discovery of new information or because of a realization that the FEIS is inadequate, an agency, of its own accord or under court order, may prepare a "supplementary environmental impact statement" or SEIS.[21] All environmental impact statements, together with comments and responses, are filed with the Environmental Protection Agency and the Council on Environmental Quality.[22] An agency cannot take any action requiring the preparation of an EIS until at least 90 days after the publication of the DEIS in the Federal Register and 30 days after the publication of the FEIS in the Federal Register.[23]

Although the point was hotly debated shortly after NEPA was passed, case law indicates that NEPA is primarily procedural—that is, once the environmental impacts are "considered," the actual decision or action by the federal agency is discretionary.[24] The consideration of environmental impacts is the method by which environmental protection was to be a made part of the mandate of every federal agency.[25] Congress hoped to influence decision making of federal agencies by forcing them to analyze and publicize information about the environmental effects of actions.[26]

Analysis of NEPA's requirements reveals several questions for a federal agency: is there an action? is it federal? is it significant? and what is the environment? The first three questions examine whether the environmental impact statement requirement is triggered. This Article is concerned with the last question—or, in other words, what is to be considered an "environmental impact" under NEPA.[27]

19. 40 C.F.R. §§ 1502.9(a), 1503.1, 1506.6 (1993).

20. 40 C.F.R. §§ 1502.9(b), 1503.1, 1506.6.

21. 40 C.F.R. § 1502.9(c) (1993).

22. 40 C.F.R. § 1506.9 (1993).

23. 40 C.F.R. §§ 1506.1, 1506.10 (1993).

24. *See* ANDERSON ET AL., *supra* note 5, at 845; Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350-51 (1989).

25. *See* Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

26. 40 C.F.R. § 1502.1 (1993).

27. NEPA actually requires environmental impact review at two points. The first review determines whether the project has a significant impact on the environment, thus triggering the EIS requirement. The second environmental review determines what environmental impacts are to be considered when an EIS is required. Subject to the constraint

40 C.F.R. § 1508.14 states that the *human environment* shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.[28] Environmental impacts include impacts that are "ecological . . . aesthetic, historic, cultural, economic, [and] social . . . whether direct, indirect, or cumulative."[29] Case law presents similarly broad definitions.[30] Courts have interpreted the term "environment" as encompassing "all of the factors that affect the quality of human life, [such as] crowding, squalor, and crime."[31]

Under this broad definition of environmental impact, courts have in fact recognized the aesthetic impact of federal project decisions;[32] the impact of decisions on existing land use patterns and neighborhood stability (including neighborhood cohesiveness and crime control);[33] and the impact of decisions on the general concerns of public health, safety, and community development.[34] In general, all relevant socioeconomic considerations may be evaluated.[35]

An early NEPA case summarized the breadth of the environmental impacts considered under NEPA:

> The environmental concerns courts have expressed in these cases may be classified into four somewhat overlapping categories. The first regards what might be termed health and public safety. Courts have examined a project's potential effect on the quality of air and water, the noise level of the community, and the capacity of existing or proposed sewage and solid waste facilities. Relevant as well is whether the project will affect the local crime rate, present fire dangers, or otherwise unduly tap police and fire forces in the community. The second category involves consideration of the project's impact on social services, such as the availability of schools, hospitals, businesses, commuter facilities, and parking. Apart from its

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of first determining that there is a physical impact on the environment, a discussion of environmental impacts will refer to both phases of NEPA analysis.

28. 40 C.F.R. § 1508.14 (1993).

29. 40 C.F.R. § 1508.8(b) (1993).

30. *See* Environmental Defense Fund, Inc. v. TVA, 468 F.2d 1164, 1174 (6th Cir. 1972), *aff'd,* 492 F.2d 466 (1974) (discussing the congressional mandate that federal decision making under NEPA reflect broad environmental concerns).

31. Jones v. United States Dept. Hous. Urban Dev., 390 F. Supp. 579, 591 (E.D. La. 1974).

32. *See, e.g.*, Mahelona v. Hawaiian Elec. Co., 418 F. Supp. 1328, 1334 (D. Haw. 1976) (finding that a significant aesthetic consequence may impact the human environment).

33. McDowell v. Schlesinger, 404 F. Supp. 221, 246 (W.D. Mo. 1975).

34. Como-Falcon Coalition, Inc. v. United States Dept. Labor, 465 F. Supp. 850, 859-60 (D. Minn. 1978), *aff'd and modified*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980).

35. Monarch Chem. Works, Inc. v. Exon, 466 F. Supp. 639, 655-56 (D. Neb. 1979), *aff'd*, 604 F.2d 1083 (8th Cir. 1979).

> impact on a community's services, a project may alter the character of the area in which it locates—the third category. Conformance to local zoning ordinances, harmonization with proximate land uses, and a blending with the aesthetics of the area are concerns relevant to this category. The final category involves consideration of the project's impact on the community's development policy. Relocation of a federal facility from a downtown to a suburban location, for example, might contribute to urban blight and decay. Neighborhood stability and growth are values which have been found to be cognizable under NEPA.[36]

Although the sociological effects of projects have been recognized as environmental impacts under NEPA, many courts have held that an analysis of sociological and other secondary environmental factors is only required if there also has been a direct impact on the physical environment.[37]

This limitation was at issue in the most important United States Supreme Court case outlining the type of environmental impacts that may be considered under NEPA. In *Metropolitan Edison Co. v. People Against Nuclear Energy*[38] [hereinafter *PANE*], the Supreme Court stated that damage to psychological health caused by the *risk* of a nuclear accident was beyond the purview of NEPA.[39] The Court determined that Congress intended the word "environment" as used in the context of "environmental impact" to mean the "physical environment."[40] The Court explained the words "physical environment," by reference to the conference report on the bill wherein Senator Jackson stated that the bill would avoid harm to the air, land, and water.[41] However, the Court recognized that controlling the physical effects of a governmental action is the procedural means to achieve the ultimate goal of enhancing overall human health and welfare.[42] Following this logic, in *PANE*, the Supreme Court determined that government agencies could consider non-physical environmental impacts under NEPA as long as NEPA was "read to include a requirement of a reasonably close causal relationship between a change in the physical en-

36. *Como-Falcon*, 465 F. Supp. at 859.

37. *See* Mary Elizabeth Nelson, Note, *Rejection of Risk Under NEPA, Stress, and "People Against Nuclear Energy"*, 33 AM. U. L. REV. 535, 552 (1984) (discussing the doctrine of primary and secondary effects).

38. 460 U.S. 766 (1983).

39. *Id.* at 775. However, the Court did note that certain psychological stress might be cognizable under NEPA if it was caused by a direct sensory impact. *See also* Animal Lovers Volunteers Ass'n (ALVA) v. Weinberger, 765 F.2d 937, 938-39 (9th Cir. 1985).

40. *PANE*, 460 U.S. at 772.

41. *Id.* at 773 (citation omitted).

42. *Id.*

vironment and the effect at issue."[43] The Court explained that this "requirement is like the familiar doctrine of proximate cause in tort law."[44] The Court noted that the impacts of *realized* risks, which are physical, are to be considered, but that the impacts of the risks themselves, which are non-physical, are not.[45] Under the Court's analysis in *PANE*, if an "impact," like psychological stress, results from a non-physical change to the environment, such as an unrealized risk, the connection between the psychological stress and the government action is not close enough to trigger the NEPA regulatory framework.[46]

In reaching its decision in *PANE*, the Court also noted that examining purely psychological effects that have no direct causal link to a physical change in the environment would make NEPA analysis unmanageable.[47] "The scope of the agency's inquiries must remain manageable if NEPA's goal of 'insur[ing] a fully informed and well considered decision,' . . . is to be accomplished."[48] The Court expressed the view that examining purely psychological health effects under federal projects would require agencies "to expend considerable resources developing psychiatric expertise that is not otherwise relevant to their congressionally assigned functions," which would lessen resources available for protection of the physical environment.[49] Thus, the court validated the proposition that there is no bar to consideration of any "environmental" impacts under NEPA, including psychological ones, as long as they were the result of a physical change in the environment. As the Court stated:

> Examination of NEPA's provisions reveals that Congress, in speaking of the "human environment," was not concerned solely with the physical environment . . . . The congressional declaration of purpose speaks of encouraging harmony between people and their environment . . . . The declaration of national environmental policy, the keystone of NEPA, recognizes both the effects of people on the natural environment and the effects of changes in the environment on the welfare and development of people.[50]

In the body of NEPA case law there appears to be only one significant substantive limitation to the breadth of environmental im-

43. *Id.* at 774.
44. *Id.* at 775.
45. *Id.*
46. *Id.*
47. *Id.* at 776.
48. *Id.* at 776 (citations omitted) (quoting Vermont Yankee Nuclear Power Corp. v. Natural Resources Reference Council, Inc., 435 U.S. 519, 558 (1978)).
49. *PANE*, 460 U.S. at 776.
50. George J. Skelly, Note, *Psychological Effects at NEPA's Threshold*, 83 COLUM. L. REV. 336, 341-42 (1983) (footnotes omitted).

pacts that may be considered under NEPA, and that is a limitation on considering "environmental impacts" that are the result of bias or discrimination.[51] The courts that have come to this conclusion appear to be concerned that people are using NEPA to avoid economic, racial, and cultural integration of neighborhoods, thereby enshrining exclusionary zoning. In *Como-Falcon*, in which the plaintiffs were arguing that in citing a proposed federal job corps center, the Department of Labor should have prepared an environmental impact statement because of the effects of the project on crime and the character of the neighborhood, the court tried to distinguish impacts on neighborhood character from impacts resulting from the presence of people that others might consider undesirable.[52] The court stated "that the mere influx of low-income persons into a wealthier community should not be regarded as an adverse environmental impact."[53]

In summary, NEPA provides federal agencies a broad mandate regarding what is to be considered as a part of the environment for purposes of environmental impact analyses. The only limitations appear to be (1) that an "environmental impact" must have some causal connection to a change in the physical environment and (2) that it can not be based on the presence of societal discrimination or bias.

However, even though NEPA requires that governmental actors consider all relevant significant environmental impacts of an action (outside of discriminatory ones), case law has not yet recognized impacts on certain important environmental values that should be part of the NEPA decision-making process: values concerning risk allocation and our society's philosophical values about the environment.[54] Today, the values of environmental philosophy and environmental risk allocation have not yet been recognized as environmental values that may be affected by governmental decisions. The next two Sections of this Article will show that they are important environmental

51. *See* Como-Falcon Coalition, Inc. v. United States Dept. Labor, 465 F. Supp. 850, 859-60 (D. Minn. 1978), *aff'd and modified*, 609 F.2d 342 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); Nucleus of Chicago Homeowners Ass'n. v. Lynn, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); Maryland-National Capitol Park & Planning Comm'n v. United States Postal Serv., 487 F.2d 1029 (D.C. Cir. 1973).

52. *Como-Falcon*, 465 F. Supp. at 857-58.

53. *Id.* at 857 (citation omitted); *see also* Trinity Episcopal Sch. Dist. v. Romney, 387 F. Supp. 1044, 1079 (S.D.N.Y. 1974), *aff'd in part, rev'd in part on other grounds*, 523 F.2d 88 (2nd Cir. 1975) (holding that alleged anti-social behavior of low income persons is not to be considered under NEPA).

54. I use the term "value" broadly to mean anything that is desired or brings a positive benefit to a society or person whether or not the benefit is measurable in monetary terms.

values, and thus, impacts on them from governmental decisions must be considered when analyzing environmental impacts under NEPA.

III. Environmental Risk Is an Environmental Value

Although much of the discussion in the United States concerning environmental laws and risks presents the value of environmental regulation or mitigation only in terms of human lives saved or the effect on human health,[55] broader values often factor in our environmental decision-making process. Yet, even though these values play a part in our environmental regulatory policy, they are not uniformly considered in NEPA analyses as environmental values that can be affected by agency action. One of these often overlooked values is the value we assign to the presence and distribution of environmental risks.

It has long been clear that human beings value certain kinds of risks differently, *i.e.* some people may want to avoid involuntary exposure, or particularly painful deaths, while for others it is more important to avoid an uncertain death.[56] "Tolerable' risk level issues are inextricably linked with the process by which the risk was allocated or imposed."[57] The ability to control one's own fate or perceive that one's fate is in one's own control is important to people. Many people do not like to be subjected to risks that are not of their own choosing or from which they receive no commensurate benefit. It has been estimated that voluntary risks are preferable to involuntary risks by a factor of over 1000.[58] Therefore, how we allocate risks is a value that shapes our regulation and use of the environment.[59] For ease of discussion, I call this value environmental risk allocation.

Mark Sagoff's description of the concerns that residents of Lewiston, New York had in the face of nearby radioactive wastes highlights this point, as he noted that there are differences "between the risks [the residents] take, for example, by smoking or by driving, and the risks imposed on them, for example, by a nearby but hidden depository for nuclear wastes. There is an ethical difference between jump-

55. *See generally* STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE, TOWARD EFFECTIVE RISK REGULATION 15-16 (1993).

56. *Id.* at 15-16.

57. Roger E. Kasperson, *Six Propositions on Public Participation and Their Relevance for Risk Communication*, 6 RISK ANALYSIS 275, 280 (1986).

58. Starr, *Social Benefit vs. Technological Risk*, 165 SCIENCE 1232, 1235 (1969).

59. W.D. ROWE, AN ANATOMY OF RISK 136-37 (1977); *see generally* Daniel Goleman, *Hidden Rules Often Distort Ideas of Risk*, N.Y. TIMES, Feb. 1, 1994, at C1 (describing psychological factors affecting risk perception and allocation).

ing and being pushed—even if the [objective] risks and benefits are the same."[60]

Assuming that the study of legislation can be a window into human preferences, and thus human values,[61] evidence that values associated with environmental risk allocation have had great importance in our own society can be seen by their presence in CERCLA regulation.[62] CERCLA requires a cleanup of environmentally contaminated sites to "assur[e] protection of human health," without regard to costs.[63] Such a statutory scheme internalizes private risk externalities by forcing the producer of the risk to contain it. Because CERCLA forgoes traditional cost benefit analysis (such as whether the alleviation of health concerns is justified by the costs of the program) to cleanup contaminated sites in favor of imposing the costs of total cleanup exclusively on the "polluting" party (which may be much more expensive), there must be a large "value" or "cost" associated with risk allocation.[64] In other words, if society is willing to spend money that has no perceivable effect beyond an alteration of the allocation of a risk, the allocation of that risk must be a value. Thus, costs that the government imposes upon an individual person or company to reduce the risk to others from activities of that individual person or company may not represent societal judgment about the value or harm of that risk itself, but rather a recognition of the value of the *allocation* of the risk. The value given to risk allocation is derived from the preference that whatever risks individual activities cause, those risks should be borne by the company or person benefitting

60. MARK SAGOFF, THE ECONOMY OF THE EARTH 46 (1988).

61. ERIC ASHBY, RECONCILING MAN WITH THE ENVIRONMENT 8 (1978) (describing legislation as validation of public opinion). This assumption is not universally agreed with, and there are significant limitations—such as the relative power between political interest groups—to its application. Such objections could be the subject of their own article. For purposes of this Article, I assume that in a democracy, legislation generally reflects the wants and desires of a majority of our society.

62. Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675 (1988 & Supp. IV 1992).

63. 42 U.S.C. § 9621(d)(1) (1988).

64. This, of course, assumes that the law acts in an economically efficient manner such that laws most economically preserve the societal values they represent. There is some amount of disagreement over this assumption. Although law and economics theory assumes that *common law* may be driven by economic efficiency, this may not be true of statutory law. Nevertheless, since society presumably wishes to effectuate its desires as economically as possible, the tendency should be for statutory laws to accomplish their goals in an economically efficient manner.

from the activity. Therefore, at least under CERCLA, the allocation of risk has value apart from the harm from the risk itself.[65]

Strict liability in tort law provides a more general example of the recognition of the value of risk allocation. Generally, strict liability forces individuals or companies to pay for any harm resulting from their services or products without regard to fault or negligence, even if the person harmed might have been able to avoid the harm at a lower cost than the tortfeasor.[66]

In the context of environmental harms, however, traditional tort law does not adequately accommodate the value attached to risk allocation. For example, because the causation mechanisms for cancer are sometimes unknown and difficult to trace, it would be very hard for an individual living near a toxic waste dump who developed cancer to prove that the cancer was caused entirely or in part by the individual's proximity to the waste dump.[67] But causation is a necessary and required element for tort recovery.[68] Therefore, because tort law cannot effectively compensate victims for exposure to carcinogens by forcing companies and individuals to internalize their costs through tort liability, society accommodates the value of risk allocation under CERCLA by choosing to require that the individuals and companies who produce toxic wastes directly internalize the costs of destroying them, containing them, or otherwise rendering them harmless without regard to cost.[69]

Paradoxically, our wish to have the government require other persons to control the outcomes of their behavior reflects our own desire that *our* day-to-day activities not be altered or coerced in order to reduce risk. This freedom from coercion in the context of risk control has a value and explains why many of our environmental management policies do not rely on large "education" or compulsory

65. Economists might see the problem differently as the disjunction between people's willingness to accept (WTA) a risk and their willingness to pay (WTP) for risk alleviation. In theory, the willingness to accept a risk is much higher than the willingness to pay, and this could explain the large costs associated with allocating risk on people who perceive that they hold an entitlement to be risk free. *See* Jack Knetsch, Asking the Right Question: The Reference Point and Measures of Welfare Change 14-16 (1994) (on file with the author).

66. WILLIAM PROSSER, A HANDBOOK OF THE LAW OF TORTS 705, 728 (5th ed. 1982).

67. Bert Black & David E. Lilienfeld, *Epidemiological Proof in Toxic Tort Litigation*, 52 FORDHAM L. REV. 732, 739 (1984-85); Note, *The Impracticality of Traditional Tort Analysis to Environmental Risks: The Example of Toxic Waste Pollution Victim Compensation*, 35 STAN. L. REV. 575, 614 (1983).

68. WILLIAM PROSSER, A HANDBOOK OF THE LAW OF TORTS 236 (4th ed. 1971).

69. 42 U.S.C. § 9621(d)(1) (1988).

behavior programs to accomplish policy objectives. This is true even though such programs may be more "cost effective" than current programs from the government's point of view.[70]

Thus, it may be true that it would be cheaper to require everyone to put on sunscreen than to ban chlorofluorocarbons, which may be responsible for the destruction of the ozone layer. However, such a policy choice would require us as individuals to expend time and energy it has a great personal cost. The fact that such a program is not implemented demonstrates, once again, that there is a value to risk allocation.

Similar policy discussions have centered on laws requiring the use of seat belts and motorcycle helmets or coercive governmental programs designed to produce changes in Americans' drinking, smoking, and dietary habits.[71] Though some regulations coercing individual behavior have been implemented, the policy debates usually focus on correcting for the external costs of personal action (such as the cost of health care for uninsured motorcyclists) rather than on using coercion as a tool to lower the "costs" of risk.

Thus, there are values and costs associated with the allocation of risk. Where allocation of environmental risks are indicated in connection with a governmental action, these environmental values require an environmental impact analysis under NEPA.

IV. Environmental Philosophy Is an Environmental Value

Environmental laws such as CERCLA, RCRA, TSCA, and FIFRA[72] are primarily based on values concerning the protection of human life. However, many of society's environmental policy choices can only logically be explained by the desire to preserve a particular philosophy or world view concerning the environment.[73] Thus, this philosophy must have value, at least to some. What I refer to as envi-

70. BREYER, *supra* note 55, at 23.

71. Stephen Sugarman, Nader's Failures?: *A Review of Jerry Mashaw's and David Harfst's* The Struggle for Auto Safety, 80 CAL. L. REV. 289 (1992); Peter Huber, *Safety and the Second Best: The Hazards of Public Risk Management in the Courts*, 85 COLUM. L. REV. 277, 281 (1985).

72. Respectively, the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675 (1988 & Supp. IV 1992), the Resource Conservation and Recovery Act, 15 U.S.C. §§ 2601-2692 (1988 & Supp. V 1993), the Toxic Substances Control Act, 15 U.S.C. § 2601, and the Federal Insecticide, Fungicide, and Rodenticide Act. 7 U.S.C. §§ 136-136y (1988).

73. The benefits of toxic control laws could extend more strongly to the natural environment, particularly in the case of insecticides and other pest relief measures. Although only recently linked to breast cancer, DDT has long been banned in our country for its

ronmental philosophical values are the values we place on preserving the environment in a natural state regardless of apparent direct human benefits.[74] As Thomas Heller describes, environmental philosophy presumes that "nature is a source of value not because it is used but because it continues to exist."[75] Environmental philosophical values are sometimes harder to see than other values and may not even be consciously recognized, but they exist nonetheless.[76]

The writings of Thoreau and Emerson evidence the historical presence of an environmental philosophy that values unaltered nature. Emerson believed that nature held the secrets of life and that only through the contemplation of unaltered nature could a person reach his or her true pinnacle. Unlike the later conservation movement, the benefit of nature was not solely in serving the material or even aesthetic needs of humankind, but in a deeper philosophical goal. As stated by Emerson, "all natural objects make a kindred impression [of a 'certain reverence'] when the mind is open to their influence. It is this which distinguishes the stick of timber of the woodcutter from the tree of the poet . . . ."[77] It is possible to argue that ultimately this philosophy is human centered, but this simply brings up the seeming paradox of whether anything humans value can ever have benefit to humans apart from the fact that they value it.

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effects on the animal and plant world as detailed in RACHEL CARSON, SILENT SPRING (1962).

74. I do not idly choose the term "philosophy." Philosopher George Sessions has written that the change in environmental values since the 1960s is fundamentally religious and philosophical. George Sessions, *The Deep Ecology Movement: A Review*, 11 ENV. REV. 107 (1987).

75. Thomas C. Heller, *The Importance of Normative Decisionmaking: The Limitation of Legal Economics as a Basis for Liberal Jurisprudence—As Illustrated by the Regulation of Vacation Home Development*, 1976 WIS. L. REV. 385, 405. Other commentators are more specific. Robert Paehlke defines a 13-point list that encompasses the concerns of environmental philosophy. Robert C. Paehlke, *Environmental Values and Public Policy*, *in* ENVIRONMENTAL POLICY IN THE 1990s, at 350-51 (Norman J. Vig & Michael E. Kraft eds., 2d ed. 1993).

76. In discussing whether we need to create an environmental ethic, Robin Attfield recognizes the presence of an environmental ethic or philosophy that need only be acknowledged to have its needed effect:

> The case for a new ethic should rather consist in exhibiting principles which have not always been recognized but which are nevertheless implicit in our moral traditions, or, perhaps, in morality itself, and which it is important now to acknowledge.

ROBIN ATTFIELD, THE ETHICS OF ENVIRONMENTAL CONCERN 4 (2d ed. 1991).

77. Ralph Waldo Emerson, *The Romantic Philosophy of Nature*, *in* AMERICA AND THE ENVIRONMENT 1, 4 (John Opie ed. 1971).

These philosophical values have continued and have even gained popularity in modern times.[78] As Mark Sagoff notes, the entire distinction between modern environmentalism and the old conservation movement is that modern environmentalism supports the preservation of the environment as a goal in and of itself. In Sagoff's words:

> The environmental movement which arose in the 1960s and 1970s differs from conservationism in defending a nonutilitarian conception of man's relationship to nature. . . . "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong otherwise."[79]

According to Eric Ashby in his book, *Reconciling Man with the Environment*, the evidence for the existence of a modern environmental philosophical value for natural preservation for its own sake "comes from the study of public opinion and social legislation, which is often the formal validation of public opinion."[80] Ashby cites the opposition to the building of a reservoir at Cow Green in England. Ashby noted that there was no question as to the quantifiable usefulness of the reservoir of Cow Green, "no one lived in Cow Green and the place was useless for agriculture."[81] However, in 1964, a battle was fought over the reservoir because many felt that a plant, the Teesdale Sandwort, which had no known use to humans, might be harmed.[82]

In our own country, a concrete example of the use of the value of environmental philosophy can be found in the Endangered Species Act[83] which decrees that no action, such as a direct killing or habitat destruction, should be taken against an animal or plant species faced with extinction. Though at various times policy makers have tried to assign "rational" values to the policy embodied in the Endangered Species Act (such as the fact that a given plant or animal might hold the secret to the cure for cancer or that humans enjoy admiring certain animals),[84] these "rational" values cannot explain the breadth of

78. *See, e.g., Plastic Trees*, *supra* note 7, at 338-46 (detailing the discussion of the basis for environmental philosophy between Laurence Tribe and Mark Sagoff).

79. Mark Sagoff, *Can Environmentalists be Liberals? Jurisprudential Foundations of Environmentalism*, 16 ENVTL. L. 775, 779-80 (1986) (citation omitted) (quoting A. Leopold, *The Land Ethic*, *in* A SAND COUNTY ALMANAC WITH ESSAYS ON CONSERVATION FROM ROUND RIVER 262 (1949).

80. ASHBY, *supra* note 61, at 8.

81. *Id.*

82. *Id.* at 9.

83. The Endangered Species Act, 16 U.S.C. §§ 1531-1544 (1988 & Supp. V 1993).

84. *See Plastic Trees*, *supra* note 7, at 344 (stating that preserving endangered species may further human welfare).

the prohibition.[85] If such justifications were the case, the law should not apply to certain species (like the snail darter) that provide neither an aesthetically pleasing appearance nor the potential for other concrete benefits.[86]

Similarly, evidence of environmental philosophy can be found in the legislative preambles to our major environmental statutes, such as the Clean Water Act, which state as their goal not a reduction in pollution to a non-harmful level, but an ethical objective such as a cleaner environment.[87]

This environmental philosophy can also be seen in decisionmaking at the micro level. For example, the concept of a "nature retreat" to gain moral strength and fortitude is an acceptable individual decision in our culture. In addition, "wastage" of the environment has long been frowned upon in most societies; for example, our literature does not show Robinson Crusoe laying waste to his island as he planned to leave.[88] Finally, some Christians believe that their faith requires them to protect the environment as a protection of God's creation.[89]

Though manifest in different forms, these examples demonstrate a deeply ingrained notion about what humans should and should not do with respect to the natural environment. There clearly exists a view of nature as having intrinsic worth and an inherent value that is as important a reason to protect the environment as environmental impacts on human health.[90]

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85. Although not explicitly considered in this Article, there is certainly another philosophy at play in our societal decisions regarding endangered species—the philosophy of animal rights. Animal rights may be related or unrelated to environmental philosophy depending on the person holding the belief., *i.e.*, some persons who believe that animals have intrinsic rights might consider this a right of "nature," while others might focus solely on the animals.

86. In a highly unusual action, Congress precluded the snail darter from Endangered Species Act coverage.

87. Sagoff, *supra* note 60, at 14; *see also Plastic Trees*, *supra* note 7, at 337, 357 (noting that often the environmental goals of major federal environmental statutes are only limited by "economic and technological feasibility").

88. *See* DANIEL DEFOE, ROBINSON CRUSOE (Knopf 1992). My thanks to Mary Midgley for this example.

89. *See, e.g.*, Ari L. Goldman, *Religion Notes*, N.Y. TIMES, Apr. 23, 1994, at 10 (noting the environmentally protective efforts of the Interfaith National Religious Partnership for the Environment).

90. ASHBY, *supra* note 61, at 7-8; *cf.* ATTFIELD, supra note 76, at 146 (questioning the theory behind the "environmental ethic," but acknowledging that the possibility of objects having intrinsic value "remains an open one").

Environmental philosophy can also be seen in the very existence of the "sustainable development" movement.[91] Critics have identified some parts of the sustainable development movement as calling for draconian behavioral changes in the name of very little safety or environmental protection.[92] If the criticism of the movement, that it refuses to recognize the validity of certain cost benefit analysis, is correct, then this supports the theory that some value other than human health is an important factor in crafting environmental policy.

Of course, the origin of environmental philosophy may well be related to values associated with human health or the economic concept of self-interest. For pre-industrial societies, environmental impacts of their actions were generally localized and environmental destruction could often be seen and attributed to specific actions. Since effects were localized and specifically related to behavior, the immediate economic impact of environmental degradation was at least partially internalized.[93] As human activity, mobility, population, and technology increased, the effects of one's *individual* action may not have been as apparent, while the effects of *cumulative* destruction may have become more noticeable.[94] To preserve the common good a moral compact, now enshrined in this environmental philosophy, must have arisen to prohibit unrestrained degradation of the environment for the benefit of all. If I do not degrade the environment, neither will you.[95]

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91. Although parties use different definitions, in general "sustainable development" refers to "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." Jonathon Lesser & Richard Zerbe, Jr., The Economic Analysis of Sustainability: Issues and Policies 1-2 (1994) (on file with author).

92. John Baden, *Balancing the Earth's Economy and Ecology*, FREE PERSPECTIVES, Summer 1993, at 1.

93. As one note states:

> In the past, it can be argued, humans understood the fragility of nature and their ability to produce effects harmful to it. Furthermore, the harm humans might have produced, such as overgrazing livestock or overpopulating the land, had profound effects not only on nature, but on humans themselves. Overgrazing or overpopulation, for example, would generally have resulted in starvation or relocation, both trying experiences.

Kenneth W. Swenson, Note, *A Stitch in Time: The Continental Shelf, Environmental Ethics, and Federalism*, 60 S. CAL. L. REV. 851, 874-75 (1987).

94. For instance, if people put hydrocarbons (which have become more commonly used in the household in the last three decades) in city drainage and sewage systems, the impact does not fall entirely on them. Yet, the cumulative impacts of such actions affect the environment and the health of everyone.

95. Evelyn Shirk also believes that this environmental philosophical value arose as a replacement for other values, but that it arose more recently and replaced Mother Nature's

Consider, for example, the modern "morality" or "philosophy" which teaches that stealing is "bad" even in the absence of "punishment" or "economic loss." Why do we have such a philosophy? Such a rule is certainly not in the individual's narrow economic self-interest since it prohibits taking useful objects (or money that purchases these objects) that are needed. However, such a moral compact became necessary when individuals were no longer able to personally protect all of their possessions from marauders. To avoid chaos, members of most early societies were willing to forgo the ability to take goods freely (except in specific situations such as war and conquest) if it meant that their own goods would be similarly protected.[96] I believe environmental philosophy arose in such a fashion.

As our society puts even more pressure on the environment, leading to even more environmental harms without specific individual causes,[97] the importance or value of environmental philosophy may increase. Our society's very power to drastically alter the earth may accentuate the philosophy not to do so.

The fact that these environmental philosophical values are sometimes not explicitly acknowledged should not detract from the value they have to society. Both sides of the regulatory debate often engage in a conspiratorial silence about these values. Even if they are consciously aware of these values, those who hold philosophical values about environmental regulation often do not discuss them for fear of being labelled irrational.[98] Meanwhile, those who do not recognize or value environmental philosophy may not emphasize its presence in others for fear that people will latch onto it as legitimate. Aldo Leo-

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attempts at protection of the environment, not our own protection resulting from economic self-interest. As she writes:

> Our nurturing "mother" was previously understood to be self-rejuvenating. She could be counted on to regrow her forests despite the woodsman, purify her streams despite the dumpster, restore her lakes despite the fishermen, and replenish the land with animals despite the huntsman.

See Evelyn Shirk, *New Dimensions in Ethics: Ethics and the Environment*, *in* ETHICS AND THE ENVIRONMENT 4 (Richard Hart ed., 1992).

96. Perhaps the classic "prisoner's dilemma" would not be such a dilemma if there were a prevalent philosophy that taught that everyone should try to protect each other's interest, and thereby protect her own.

97. For example, see Environmental Defense Fund v. TVA, 468 F.2d 1164 (6th Cir. 1972), *aff'd*, 492 F.2d 466 (1974).

98. Mark Sagoff opines that the reason many people do not admit to holding an environmental philosophy, though it plays such an enormous role in our societal decisions, is "the insecurity [that] many of us feel when we find ourselves without 'neutral' theories and criteria against which to evaluate political, ethical, and aesthetic positions." SAGOFF, supra note 60, at 67.

pold recognized this "subterfuge" at an earlier time when recognizing "value" in the mere presence of nature:

> One basic weakness in a conservation system based wholly on economic motives is that most members of the land community have no economic value. Wildflowers and songbirds are examples. Of the 22,000 higher plants and animals native to Wisconsin, it is doubtful whether more than five percent can be sold, fed, eaten, or otherwise put to economic use. Yet these creatures are members of the biotic community, and if (as I believe) its stability depends on its integrity, they are entitled to continuance.
>
> When one of these non-economic categories is threatened, and if we happen to love it, we invent subterfuges to give it economic importance. At the beginning of the century songbirds were supposed to be disappearing. Ornithologists jumped to the rescue with some distinctly shaky evidence to the effect that insects would eat us up if birds failed to control them. The evidence had to be economic in order to be valid.[99]

We should not ignore the value of environmental philosophy simply because it is unacknowledged or considered illogical. As Daniel Farber stated:

> [R]easons to value something are unnecessary: to value something is simply to care about it. Just as we accept as valid that which we see, we can accept as valid that which we care about. In life . . . neither perception nor caring needs any logical foundation.[100]

Thus, environmental philosophy is an environmental value. As an environmental value, impacts on it should be considered in the NEPA process.

V. Once Recognized as Environmental Values, NEPA Requires an Analysis of Environmental Risk Allocation and Environmental Philosophical Values When Environmental Impacts Are Considered

As significant environmental values that can be affected by governmental action, this Article argues that these environmental values, which I have described as environmental risk allocation and environmental philosophy, must be considered when environmental impacts are analyzed under NEPA.

99. Aldo Leopold, *Immoral Man and the Moral Universe, in* AMERICANS AND THE ENVIRONMENT 43, 52 (John Opie ed., 1971). Robin Attfield also recognizes the need to acknowledge values. ATTFIELD, *supra* note 76, at 4.

100. *Plastic Trees*, *supra* note 7, at 345.

A. Statutory and Case Law Interpretation Require the Consideration of These Values

Examining NEPA language indicates that such consideration is compelled when one recognizes environmental risk allocation and environmental philosophy as environmental values. Under NEPA, an impact statement is required for all major federal action "significantly affecting the quality of the human environment."[101] The implementing regulations define the scope of the human environment broadly, "[h]uman environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment."[102] As concepts that have value to people, environmental risk allocation and environmental philosophy are part of the relationship of people with the environment, and they can be significantly affected by specific federal actions.

Congressional intent further supports the consideration of environmental risk allocation and environmental philosophy as values to be considered under NEPA. As noted in Part III, risk allocation is a type of externality, and Congress clearly intended to correct for environmental externalities in the passage of NEPA.[103] Moreover, as for environmental philosophy, the introduction to NEPA states that "it is the continuing policy of the Federal Government" to "use all practicable means and measures . . . to create and maintain conditions under which man and nature can exist in productive harmony."[104] This statement indicates congressional concern with nature as a mythic whole, not a concern for nature solely for the benefit of humankind.

Many cases recognize the expansive congressional intent in enacting NEPA.[105] As noted in Part II, the only limitation apparent from the case law and regulatory interpretation of the statute that could affect the consideration of these values is that so-called secondary impacts on the human environment—such as socioeconomic impacts or impacts on neighborhood stability—are only to be considered if they are causally related to changes in the physical environment.[106] In

101. 42 U.S.C. § 4332(2)(C) (1988).

102. 40 C.F.R. § 1508.14 (1993).

103. 42 U.S.C. § 4332(2)(C) (1988).

104. 42 U.S.C. § 4331(a) (1988).

105. *PANE*, 460 U.S. at 775.

106. *Environmental Defense Fund*, 468 F.2d at 1112-15; *Como-Falcon*, 465 F. Supp. at 857-58 n.3 (noting case law holding that social and economic effects alone do not trigger an EIS in the absence of a "primary impact on the physical environment").

other words, there must be some physical effect to trigger a NEPA analysis.[107]

The value of environmental risk allocation meets this requirement. In *PANE*,[108] although the Court spoke of "risk" itself as not being related in a general sense to the physical environment, the Court explicitly noted that realized risks are a part of the physical environment and that impacts which could flow from a risk if it were realized should be considered in the NEPA process.[109] Thus, in *PANE* it was appropriate for the Nuclear Regulatory Commission (NRC) to consider the possible effects on the environment that might result if the risk of a nuclear accident were realized. However, the NRC was not required to consider any psychological harm that resulted from the presence of the unrealized risk itself because the "risk" was not a physical effect, and therefore the psychological harm was not causally connected to a change in the physical environment.[110]

Unlike psychological stress in the *PANE* case, which the Court held was not cognizable under NEPA, the harms associated with environmental risk allocation are only present *after* the risk has been realized. For instance, there is no cost to disproportionately bearing the increased risk of cancer from leaking chemical agents caused by the externality associated with another's behavior unless risk of increased cancer rates has first been realized. Thus, an impact on the physical environment from a realized risk is present before the environmental risk allocation value is affected. Wherever there is an environmental risk involved in government action, NEPA requires an analysis of the impacts of that risk if realized, and this should include the impact on environmental risk allocation. For example, if a federal agency planned to store plutonium (a potent carcinogenic, radioactive, and

107. Standing requirements also limit the ability of plaintiffs to challenge the application of NEPA in federal court. Under NEPA, a plaintiff must allege that the action caused the plaintiff to be "adversely affected or aggrieved . . . within the meaning of a relevant statute.'" Lujan v. National Wildlife Fed'n, 497 U.S. 871, 883 (1990) (quoting 5 U.S.C. § 702 (1988)).

Although in *Lujan* the injury alleged by the plaintiffs was not considered to be sufficiently specific to the federal action at issue, the Court recognized that such values as "recreational use and aesthetic enjoyment" are within the zone of interest protected by NEPA. *Id.* at 3187. Presumably, protection of any environmental value would be included in the NEPA zone of interest. If environmental risk allocation and environmental philosophy are recognized as environmental values, their consideration under NEPA could be raised in federal court if the harm were specifically tied to the action.

108. *PANE*, 460 U.S. at 775.

109. *Id.* at 775 & n.9; *see also* Olmsted Citizens For a Better Community v. United States, 793 F.2d 201, 205 (8th Cir. 1986).

110. *PANE*, 460 U.S. at 774-77.

toxic compound)[111] and there were any risk of leakage, a court would have to consider the direct environmental impact of the leakage, including health risks, if such leakage occurred. Similarly, the court would have to consider the impact of allocation of such health risks on the citizenry.

It is possible that environmental risk allocation might not be an environmental value for purposes of NEPA if the risk were only tenuously related to a government action. *PANE* indicated, and other cases recognize, that the causal link between action and harm may sometimes be too attenuated to require a NEPA analysis.[112] This is particularly true when the "action" is really an absence of governmental action.[113] However, in such cases, true risk from the governmental decision is apt to be relatively low, and the resultant risk allocation value would thus be low as well. Therefore, the requirement of an initial physical impact under NEPA does not prevent the consideration of risk allocation values.[114]

Similarly, an impact on environmental philosophical values is almost always the result of, and therefore causally related to, an actual change in the physical environment. In general, there can be no concern over the alteration of the Earth or an irrevocable commitment and endangerment of the Earth's environment, and thus no impact on

111. CRC HANDBOOK OF CHEMISTRY AND PHYSICS, at B17 (Robert C. Weast ed., 60th ed. 1979).

112. *See* GWEN Alliance of Lane County, Inc. v. Aldridge, 841 F.2d 946, 951-52 (9th Cir. 1988), *as amended on denial of reh'g*, 855 F.2d 1380 (9th Cir. 1988) (holding that the causal link between construction of an Air Force communication system and the risk of nuclear war is too tenuous to require the consideration of an EIS); *see also* Glass Packaging Inst. v. Regan, 737 F.2d 1083, 1091-92 (D.C. Cir. 1984) (rejecting as "specious" a NEPA claim that the introduction of a new plastic bottle into the marketplace leads to the risk of tampering), *cert. denied*, 469 U.S. 1035 (1984).

113. *See* Foundation on Econ. Trends v. Lyng, 943 F.2d 79, 89-90 (D.C. Cir. 1991) (Buckley, J., dissenting in part and concurring in judgment) (holding that the alleged failure of the USDA to prevent "degradation of genetic diversity that threatens the food supply" could not be said to be the proximate cause of that degradation).

114. There has been at least one federal circuit court that has implicitly failed to recognize the existence of a risk allocation value separately from the risk itself. *See* City of Aurora v. Hunt, 749 F.2d 1457 (10th Cir. 1984). In a footnote, the Tenth Circuit stated that the environmental impact of a realized risk does not have to be considered if "total risk" has not been increased by the project. *Id.* at 1468 n.8. In theory, this would mean that if a project shifted risk to different persons but the total risk was not changed, the "risk allocation value" of this shift need not be considered. Despite the fact that one could employ this reasoning to argue that it is never necessary to consider environmental risk allocation values, this comment is dicta and came from a case in which the risk at issue shifted not from the government or party receiving a benefit to an "innocent" third party, but from some "innocent" third parties to other "innocent" third parties. Therefore, this case did not consider the issue of risk allocation as discussed in this Article.

the value of those preferences in our society, unless some actual physical change in the environment, however small, is contemplated—whether it is cutting a tree, depleting an aquifer, mining, building a dam, or creating and introducing a new genetic strain of potato.

Of course, it is always possible that environmental philosophical concerns could arise too early in the process to trigger NEPA analysis. For instance, the decision to undertake some kinds of research could give rise to concerns about the ultimate results of that research even when no physical impact to the environment had occurred. Nevertheless, there would always be an intervening step of physical action implementing the research before harms could result, and the philosophical impacts should be considered at that time.[115]

Therefore, the requirement of an initial physical impact under NEPA does not prevent the consideration of environmental philosophical values.

B. The Practical Difficulties of Quantification Do Not Limit Consideration of These Values

Even if NEPA otherwise seems to indicate that the values of environmental risk allocation and environmental philosophy should be considered, the difficulty in quantification could be an objection to a consideration of these values under NEPA. It appears that the issue of quantification of values played a role in the Supreme Court's decision in *PANE*, as the Court stated that Congress intended the NEPA process to be "manageable."[116]

To the extent that this did play a part in the Court's decision, the analysis might be a misreading of congressional intent. As one commentator stated:

> The suggestion that Congress meant to require an EIS only for readily quantifiable effects is untenable. Congress felt that gaps in existing scientific knowledge about both current and long-term environmental effects could cause significant harm to be overlooked in environmental decisionmaking.[117]

Such criticism is supported by the language of NEPA, which calls for the identification and development of methods "which will insure that presently unquantified environmental amenities and values may

115. *See, e.g., Foundation on Econ. Trends*, 817 F.2d at 885-86 (holding that the USDA need not undertake a NEPA analysis of its overall research goals, although particular research projects might trigger NEPA).

116. *PANE*, 460 U.S. at 776.

117. Skelly, *supra* note 50, at 352.

be given appropriate consideration in decisionmaking."[118] Clearly, there is a burden on the government to work toward a quantification of uncertain values.

Merely stating that NEPA requires the government to consider values that are difficult to quantify does not alleviate the practical problem of actually completing the task. However, the quantification of environmental risk allocation and environmental philosophical values is not as difficult as some believe and would not prove a practical bar to consideration under NEPA.

With respect to environmental risk allocation values, it is usually easy to recognize actions that cause risk to be borne by others external to the action. Although sometimes the magnitude of such risk might be disputed, if there is a risk of increased health impacts to persons in areas proximate to projects, this risk is usually acknowledged by the agency conducting the environmental analysis. It is also easy to identify environmental impacts where mitigation would require or suggest an alteration in behavior to reduce or avoid the risk.

Once the presence of a risk is recognized, no matter how small, then simply recognizing that there can be an impact on the value (or detriment) associated with allocation of risk or the alleviation of risk through alteration of human behavior is half of the battle of quantification. If one recognizes that a risk is foisted on "innocent" neighbors of a government approved project, then the impact of that project on the environmental risk allocation value can roughly be determined by calculating how much it would cost to reallocate the risk on those who directly receive the benefit.

For example, if a governmental action—such as storage of radioactive waste—would increase the likelihood of cancer in an area, the measure of the impact should not simply be the cost of the increased deaths or injuries that may occur, but the cost of actually blocking the additional radiation so that it is at a completely safe level. The former method values only the cost of human lives against the benefits of the storage capacity, while the latter also values the risk allocation cost of those lost lives being borne by a particular group of individuals.

CERCLA and RCRA value risk allocation by requiring that external effects of hazardous wastes be minimized.[119] CERCLA does not allow a merely cost-effective cleanup—comparing costs of cleanup to the cost of lives lost or affected—but instead requires remediation to fully protect human health and the environment. Similarly, RCRA

118. 42 U.S.C. § 4332(C) (1988).
119. 42 U.S.C. § 9621(d)(1) (1988).

does not allow a producer of hazardous waste to pay for the negative effects of the hazardous waste. Rather, it requires that waste containment be totally protective of human health and the environment with a goal of totally eliminating "hazardous waste" from the environment.[120]

Similarly, with projects creating risk that would normally be alleviated by behavior modification, the mitigation alternative, which does not require an alteration of behavior, could be compared to the mitigation measure, which would require behavior alteration, with the difference in cost serving as a measure of the environmental impact on the risk allocation value.

For instance, granting a forest service permit to lease a mountain for private downhill skiing may increase automobile traffic pollution because of new development. However, one might conclude under a NEPA analysis that the costs of environmental impacts from air pollution would be low if the anticipated pollution could be mitigated by restricting automobile usage either directly or through zoning. But this would not take into account the cost to individuals of altering their behavior through housing location or driving restrictions. A more correct assessment of the environmental impact would examine the cost of the mitigation alternative, which would not require individual behavior modification such as the purchase of existing air pollution sources.[121]

Environmental risk allocation values could also be measured by doing a contingent valuation survey to determine how much money individuals would accept to be exposed to particular risks or to agree to alter their behavior.[122]

Quantifying the impact on philosophical environmental values is more difficult. After all, if philosophical values are held strongly enough, it might be hard to put any price on abandoning them. As an example, how many of us would take money to kill our own parents?[123] Certainly for some, environmental philosophical values can

120. 42 U.S.C. § 9621(d)(1) (1988); 42 U.S.C. § 6902(b) (1988).

121. The skiing example is culled from Robertson v. Methow Valley Citizens Council, 490 U.S. 332 (1989).

122. Although there are several significant limitations to the usefulness of such surveys, such as whether they measure actual economic value or include all interests people have in a resource, willingness to accept is probably more accurate than the sometimes used willingness to pay, since people could be facing the loss of something which they believe is an entitlement. *See* Knetsch, *supra* note 65, at 4-6.

123. Mark Sagoff argues that the discussion of environmental philosophy can not ever appropriately be placed in economic terms, for the same reason that we cannot put a price

be this strong, and impacts on them would thus be very costly. Nevertheless, there are possible methods to value environmental philosophy in most NEPA cases. For example, one could examine the cost of an alternative action that does not affect environmental philosophical values as suggested for the environmental risk allocation calculation. The difference in cost between the alternative that impacts the value of environmental philosophy and the alternative that does not affect environmental philosophical values would give us a measure of the impact of a particular governmental action on the value of environmental philosophy.[124]

Other environmental laws might also be used as guides to value and measurement. Generally, under the Endangered Species Act, if an action would have a detrimental effect on an endangered species, the action should not be taken.[125] This law indicates a very high value for the environmental philosophy of species preservation and perhaps biological diversity as well. Thus, if a proposed governmental action will permanently destroy a unique environmental setting or a particular strata of the environment, indicating an impact on the philosophy of biotic preservation, then even if no endangered species are known to be affected, the environmental impact of that action should be considered extremely large. As with risk allocation, contingent valuation methodology might be used as well.

What this value does not represent is the lost commercial resource value of affected resources. As discussed in Part IV, the value of the philosophy is the preservation of the environment itself, not just the preservation of the parts of the environment directly useful for human consumption. The environmental philosophical value of protecting a resource may therefore be greater and is certainly different than the sum of its parts.

C. NEPA Requires Consideration of Environmental Risk Allocation and Environmental Philosophy

In summary, both environmental risk allocation and environmental philosophical values are environmental values that may be affected by governmental action. In practical terms, these effects are reason-

on love or life. We simply recognize that there are things we ought not to pay for. SAGOFF, *supra* note 60, at 68-69.

124. In this case, even if the philosophical values are not "economic" as suggested by Mark Sagoff, we have managed to measure the cost of impact avoidance without directly measuring the value of the philosophy.

125. 16 U.S.C. § 1538(a)(1) (1988 & Supp. V 1993).

ably measurable and usually causally related to a direct physical impact. Therefore, according to the language and case law interpretation of NEPA, which require a consideration of *all* significant environmental impacts related to a physical environmental impact, impacts on environmental risk allocation and environmental philosophical values should be considered as environmental impacts under NEPA.

VI. Policy Reasons Support Consideration of Environmental Risk Allocation and Environmental Philosophy Under NEPA

In addition to the fact that statutory and case law interpretation both require consideration of impacts to these values under NEPA, there are compelling public policy reasons for their consideration as well.

A. Consideration of These Values Will Improve the Economic Efficiency of the NEPA Process

As noted in the Introduction to this Article, implementation of NEPA is often characterized by delay and cost.[126] The integration of environmental philosophy and environmental risk allocation values into the NEPA process would increase the efficiency of NEPA and reduce the "transaction" costs of expense and delay currently associated with the statute.

Ideally, requiring consideration of all environmental costs of a government project under NEPA should lead government agencies and private applicants to immediately discard those proposals for projects with a disproportionately high environmental cost because the government should recognize that such projects would not be approved after the NEPA process. By contrast, if an agency adequately considers the environmental harms associated with a project, there should be little environmental opposition to a project, and thus few lost resources in its implementation.

Ideally, if an agency actually considered all of the environmental effects in an objective cost benefit manner, the resulting decision could be supported by any rational thinker, limiting delay. Because recognition of impacts and their cost to society should be visible relatively early in the process, NEPA should be relatively cost-effective

126. Wald, *supra* note 4, at 539.

because proponents and opponents of a project will not be drawn through a long process just to have the project ultimately canceled.

Yet in many cases, this ideal model does not occur. Agencies routinely proceed with projects that many people feel should not continue because of overriding environmental concerns. This apparent inconsistency between the actual and the ideal might be explained by arguing that there are certain distributions of the costs and benefits in any project that prompt the use of NEPA for delay by a certain segment of society, even if the project were otherwise cost-beneficial after weighing all of the environmental considerations. One might also argue that many members of the public are not rational thinkers, and therefore even if all of the environmental factors were considered, the public would still use NEPA as a protest mechanism because either the public does not understand it or irrationally disagrees with the environmental analysis.

But neither of these theories adequately explains the vast gap that lies between those who oppose a project on environmental grounds under NEPA and those who supposedly are considering all of the environmental impacts of a project. Although in any project decision there might be winners and losers based on how costs and benefits are distributed—giving some credence to the rational actor model in manipulating NEPA for her own benefit—distributive effects are often already considered under NEPA, so this factor alone cannot explain the gap. Nor do I believe that this gap can be explained by some vague assertion of irrationality on the part of large segments of our society.

The real cause of the gap in environmental understanding between those who conduct a cost benefit analysis using environmental impacts from the NEPA process and those who oppose the project on environmental grounds is that NEPA has not been routinely construed broadly enough to allow for a consideration of all of the environmental impacts that concern society. Specifically, NEPA has not been construed as requiring consideration of environmental risk allocation and values associated with risk aversion, nor has it been construed as requiring an analysis of the value derived from holding and supporting a certain environmental philosophy.

When certain impacts on environmental values, such as environmental risk allocation and environmental philosophy, are not routinely considered under NEPA, but are of concern to society as a whole, this initial cost-efficient determination of project feasibility is lost with respect to these impacts. Allowing consideration of environ-

mental risk allocation and environmental philosophical values would make NEPA more efficient. As one commentator stated with respect to the *PANE* Court's refusal to consider psychological distress, "[t]his consideration would . . . allow the public to inform the agency of the public's willingness to accept a particular risk."[127]

Without consideration of these values, there will be projects, which may have effects on environmental philosophy or risk allocation values, that will proceed against a wall of public opposition and that may ultimately derail them. However, because these values are not presently considered or even acknowledged under NEPA, the opposition based on these values will not be well articulated, leaving a proponent of a project unsure of how to proceed to successfully address environmental concerns and complete the project. The opposition may take the form of a different environmental concern that a project proponent will address with massive expenditures for mitigation only to find that this was not the real concern at all, thus, leading to economic waste. Moreover, the proponents of the project may never spend resources to address or mitigate the real environmental concern; consequently, the opposition will remain stalwart.

If the opposition is finally successful in stopping a project, economic waste has occurred in gauging the depths of opposition that should have stopped a project before it even started. NEPA has been criticized for allowing too much delay to consider environmental problems,[128] but many of these "problems" mask concern about environmental risk allocation or an impact on environmental philosophy.

Even if there is little public opposition, as long as there is *any* legal challenge to a project, the project could be derailed and economic waste may occur, if environmental risk allocation or environmental philosophical values are affected. It is easy to suppose that some judges, like the general public, appreciate the value of environmental philosophy and risk allocation and may through NEPA delay, prohibit, or seem hostile to a project for these reasons. Since these values have not been explicitly recognized and considered under NEPA, the basis of the judicial action may not be expressed forthrightly. Just as in cases of general opposition to government actions, this "hidden" or "masked" judicial opposition prevents a project's proponent from addressing or considering the true environmental

127. Michael A. Christofeno, Note, *Psychological Distress Under NEPA*, 19 VAL. U. L. REV. 899, 923 (1985).

128. *See* ANDERSON ET AL., *supra* note 5, at 887-88 (noting various critical views of NEPA's EIS process and of environmental impact statements themselves).

costs, leading to frustration and expense in NEPA litigation. It also incurs an indirect cost to the judiciary in terms of loss of institutional respect. Directly acknowledging these values will help restore that institutional trust.

If environmental risk allocation and environmental philosophy were explicitly considered under NEPA, then they could be addressed at low cost. The proponents of an action would have a clearer understanding of what values would be affected by a project and whether the project as presented or modified is viable, without the initial expenditure of large sums of money to address phantom environmental concerns. Even if environmental philosophical concerns or risk allocation values were not immediately clear, they would come into focus early in the project, allowing proper mitigation or abandonment of the project at a far lower cost than now exists.

Environmental risk allocation and environmental philosophy are the only major environmental values not to be considered under NEPA. Though values other than environmental ones may be at play in the use of NEPA,[129] as these values are incorporated into the NEPA decision-making process, the use of NEPA merely as a delay tactic will decline. This will bring NEPA procedure more in line with its legislative intent and will make the NEPA process more cost-effective.

B. Consideration of These Values Will Make Environmental Review More Consistent with Congressional and Societal Intent

In addition to making the NEPA process more efficient, a consideration of required values should result in more desirable environmental protection. Since NEPA requires consideration of environmental impacts and since environmental philosophy and environmental risk allocation are environmental values that may be affected by governmental action, failure to consider them results in less environmental protection than desired by Congress and presumably by society who elected Congress. Once we begin to consider all of the environmental impacts of government action, the Congress's (and presumably society's) desire to protect our environment will be more accurately reflected in our physical world.[130] Environmental

129. For example, the Not-In-My-Backyard (NIMBY) syndrome of non-environmental cost allocation.

130. For instance, a recognition of environmental philosophy might provide the framework for a consideration of the need to preserve species diversity rather than simply to protect endangered species. *See* Gary D. Meyers, *Old-Growth Forests, the Owl, and Yew:*

externalities deemed harmful by Congress will be internalized into agency decisionmaking.

Environmentalists have long criticized the courts for not interpreting NEPA as having a definitive substantive component, arguing that a procedural requirement is insufficient to effectuate the congressional policy of protecting the environment.[131] However, if NEPA required consideration of environmental philosophical and risk allocation values, this procedural/substantive dichotomy might evaporate. If the procedure required an analysis of *all* of the important environmental values at risk, then a judicial "hard look" at the procedural requirements might effectively approach the strength of a substantive review.

C. Consideration of Environmental Philosophical Values Under NEPA Provides Important Benefits External to the NEPA Process

(1) Consideration of Environmental Philosophy Under NEPA May Be Needed to Create and Maintain Effective Voluntary Environmental Protection

Ignoring the value and importance of environmental philosophy in the NEPA context may undermine all environmental values in the public eye. By not considering or acknowledging under NEPA a "whole-earth" philosophy held dear by many parts of our society, we tell our society that such a philosophy is not real, or that it is certainly not valued in this context. Just as the failure to deal equitably with racial issues by government officials appears to have often been associated with a weakening of anti-discriminatory attitudes in the general public,[132] the failure to acknowledge and consider various environmental values may contribute to their breakdown.

The failure to consider environmental philosophy may have damaging consequences on our environment. A breakdown in existing environmental philosophy can lead those whose environmental philosophical values have been eroded to actions inconsistent with this philosophy. In most cases, such actions would then merely reflect eco-

Environmental Ethics Versus Traditional Dispute Resolution Under the Endangered Species Act and Other Public Lands and Resources Laws, 18 B.C. ENVTL. AFF. L. REV. 623, 655-64 (1991).

131. *See* Timothy Patrick Brady, Comment, *"But Most of It Belongs to Those Yet to be Born:" The Public Trust Doctrine, NEPA, and the Stewardship Ethic*, 17 B.C. ENVTL. AFF. L. REV. 621, 637-40 (1990) (reviewing the line of cases that has led to NEPA's characterization as a merely procedural statute); *see also* ANDERSON ET AL., *supra* note 5, at 845-47.

132. *See* Murray Dubin, *"An Ugliness out There," Racial Attitudes: Do Polls Tell the Truth?*, SEATTLE TIMES, Mar. 11, 1990, at A17.

nomic self-interest, discarding environmental care that is purely voluntary in nature. As noted by Carol Rose in her critique of market control strategies: "Our acts and words convey varying messages about what it means to 'do the right thing,' and in any given culture, those words and messages may affect the way we use common resources."[133]

Voluntary environmental compliance may be one of our society's most effective mechanisms for controlling environmental degradation.[134] As stated by Daniel Farber, "the enforcement of a ban on littering in the park can be expensive. It can be cost free—the economically efficient result—if people refrain from littering because of irrational environmental beliefs."[135] Farber's example is supported by empirical results. Littering, which used to be a national problem, has changed greatly because of public perception and morality. Furthermore, the effects of failure to nurture an environmental philosophy may not always be local. For instance, if the protection of a plant species is deemed unimportant because there is no direct human economic benefit, then it may seem less important for a given individual not to trample on the fragile tundra in a national park or plant preserve, and this action will be multiplied a million fold. "Micro" actions can have "macro" effects.

Environmental philosophy is also a moral force that helps make the organization for environmental regulation possible. Many commentators on environmental theory claim that, like the tragedy of the commons,[136] if everyone acts in her own self-interest, there will be no

133. Carol M. Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1, 38 (1991); *cf.* John Braithwaite, *The Limits of Economism in Controlling Harmful Corporate Conduct*, 16 LAW & SOC'Y REV. 481, 489-90 (1981-82) (arguing that "[m]ost of us obey the law not because we are afraid of punishment but simply because it seems the right thing to do. Society gets more protection from the habit-forming value of law than from its deterrent value.").

134. *Cf.* Rose, *supra* note 133, at 34 (expressing concern that property rights strategies "may come at the price of a diminution in a certain element of moral suasion. In turn, this moral diminution may [create] a cultural climate in which one is not expected to do the right thing unless it is in one's direct interest to do so.")

135. *Plastic Trees*, *supra* note 7, at 349; *cf.* Swenson, *supra* note 93, at 872 (discussing the need for strong moral argument when the public is asked to forego a quality of life increase from resource exploitation—"the balance on the scales of forbearance must weigh heavily in favor of morality. Without a moral influence, society will oppose those activities which are seen as detrimental to its advancement.").

136. The "Tragedy of the Commons," wherein no one takes care of common resources because they have no economic incentive to do so, is sometimes accepted as the key to understanding why "too much" environmental degradation occurs. ANDERSON ET AL., *supra* note 5, at 19.

"organizing" to protect the environmental commons.[137] Yet, we do have organizing, and that is because of the existence of a common philosophy to protect the environment as detailed in Part III. Environmental philosophy may thus be the cornerstone of environmental law and policy building. By damaging this philosophy through neglect, we risk eroding any normative environmental standards we have.

(2) Consideration of Environmental Philosophy under NEPA May Be Needed to Nurture Other Philosophies and to Protect the Human Psyche

The continued neglect of environmental philosophical values under NEPA may have other undesirable effects beyond harm to our "natural environment."

It has also been suggested that environmental philosophy is a reflection of other moral philosophies. According to Evelyn Shirk, "[t]he environment is a recipient of our ethical choices regarding it .... It reflects the moral quality of our acts ... transmitting the moral quality of my environmental choices to you and yours to me."[138]

For example, the choice of environmental domination instead of accommodation or protection may be linked to, and may affect, other forms of societal and personal domination.

> Marcuse believes that domination in the social world is linked to the domination of nature in such a way that the disappearance of one form of domination requires the removal of the other. Behind this idea lurks Hegel's dialectic of the master and the slave. Marcuse's innovation is to cast nature in the role of the slave. In fact, Marcuse sees the relation of human masters to human slaves as both a special case of the mastery of nature and something which results from this mastery. Hegel's master seeks self-identity through being reflected by another, and attempts, unsatisfactorily, to achieve this by dominating another. In the same way, suggests Marcuse, the masters of nature seek to make nature reflect them—to make over nature in the human image. But this attempt to conquer and subdue nature has some undesirable consequences. First of all, because humans themselves are a part of nature, the enslavement of nature tends to lead to the enslavement of humans themselves by means of the same science and technology that is used to conquer nature. And secondly, the degradation of nature not only affects the prospects

137. *See, e.g.*, James E. Krier, *The Tragedy of the Commons, Part Two*, 15 HARV. J.L. & PUB. POL'Y 325, 334-39 (1992) (arguing that when property is owned in common by a community whose members are free to exploit its resources in the absence of a contrary agreement, the negotiation of conservation agreements entails a prohibitively high cost to their proponents).

138. Shirk, *supra* note 95, at 6.

> for human survival, but also diminishes human self-identity and worth.[139]

In other words, according to philosophers, the desire to protect nature can have far-reaching effects on the way in which we view other areas of our existence and lives.

It is also possible that the failure to acknowledge these environmental philosophical values may cause psychological damage as well as loss of moral attitudes. It has been suggested that we are unable to comprehend and process rapid changes in our environment and that environmental philosophy slows down the pace of change.[140] Just as there was great cultural and individual suffering when technologically advanced cultures came into contact with less technologically-advanced cultures, the incredibly rapid pace of our own technological and resulting environmental changes will greatly tax our psychological coping mechanisms. Environmental philosophy that seeks to preserve the environment for its own sake may stabilize and slow this rate of change.[141]

A potentially more devastating effect of devaluing environmental philosophy, but an effect not as clearly understood, is the loss of what has been identified as the human "genetic" connection with nature. Scientists have just begun to study what they perceive to be a genetic predisposition in humans for savannah-like environments and the sense of safety and security such environments may offer. Early results indicate that this connection, and presumably its benefits on the human psyche, may be lost by failure to nourish and encourage this identification.[142] Such a loss of connection and its effects may be difficult to measure in terms of psychological stress; but it remains a potential harm from the failure to acknowledge and nurture human values regarding humans' environmental surroundings.[143] Some have suggested the genetic connection may be explained by the fact that the contemplation of unaltered nature could relieve mental fatigue and stress.[144] These benefits have only recently been explored, and it is difficult to quantify the relationship between recognizing the value of

139. Janna L. Thompson, *Preservation of Wilderness and the Good Life*, *in* ENVIRONMENTAL PHILOSOPHY 85, 99 (Robert Elliot & Arran Gare eds., 1983).

140. ALVIN TOFFLER, FUTURE SHOCK (1970).

141. *See* PETR BECKMANN, ECO-HYSTERICS AND THE TECHNOPHOBES 27-31 (1973) (describing "future shock" and discussing various reactions to it).

142. Bill Dietrich, *Is Our Love of Nature All in the Genes?*, SEATTLE TIMES, Jan. 4, 1994, at E1.

143. *Id.*

144. Sherry Stripling, *Nature's Calming Influence Measured*, SEATTLE TIMES, Oct. 21, 1994, at E1.

environmental philosophy in NEPA, and the fostering of these values. Nevertheless, these benefits should not be ignored in a thorough examination of this issue.

In summary, a consideration of environmental philosophy and risk allocation values under NEPA would yield many benefits, both within the NEPA process itself and in other areas of society.

VII. How Such an Analysis Would Actually Work Under NEPA

As an example of how these values could be considered and would affect a NEPA analysis in a real-life project, consider the case of the proposed development of the Early Winters Ski Resort in the State of Washington. The factual background is set out in the Ninth Circuit opinion on the appeal of the adequacy of the NEPA process for the proposed land lease from the United States Forest Service.[145]

> Sandy Butte overlooks the Methow Valley, an unspoiled, sparsely populated area on the eastern side of the North Cascade Mountains in the State of Washington. The Methow Valley provides critical winter range and migration corridors for Washington's largest migratory deer herd. Sandy Butte is a 3,900-acre parcel in the Okanogan National Forest. The upper one-third of Sandy Butte is entirely roadless. In 1978 appellee Methow Recreation, Inc. (MRI) applied for a "special use" permit to develop and operate a four-season destination ski resort on Sandy Butte and a large parcel of private land it had acquired adjacent to Sandy Butte. The proposed development is known as the Early Winters project. The project is expected to spawn extensive commercial and residential development in the Methow Valley. Pursuant to requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332, mandating completion of an Environmental Impact Statement (EIS) analyzing the environmental impacts of "major" governmental actions, the appellee Forest Service studied the question of whether it should allocate Snady Butte for use as a downhill ski area. In 1982 the Forest Service published a draft EIS on a proposal to designate Sandy Butte for use as a major ski area capable of serving 8,200 skiers at one time (SAOT). The final EIS was issued in 1984. Based on its contents, in July 1984 the Regional Forester issued a "Record of Decision" which adopted a "future management plan" for Sandy Butte. The plan allocated the area for use as a ski area capable of serving 8,200 SAOT. The record of decision also approved the issuance of a special use permit to MRI for the Early Winters Project.[146]

145. Methow Valley Citizens Council v. Regional Forester, 833 F.2d 810 (9th Cir. 1987), *rev'd sub nom.*, Robertson v. Methow Valley Citizens Council, 490 U.S. 332 (1989).

146. *Methow Valley Citizens Council*, 833 F.2d at 811.

The proposed ski resort had been investigated in a feasibility study in 1970, but because of opposition from environmentalists and attempts at negotiation, no action was taken by the Forest Service on the special use permit until 1984.[147] When the permit was finally granted, the battle against Early Winters shifted to the federal courts. Although there were several technical issues regarding NEPA review that were litigated, the specific contentions regarding the adequacy of the NEPA process after preparation of the Final Environmental Impact Statement (FEIS) concerned the impact of such a large ski resort on the migratory mule deer herd and on air quality.

The issues of the mule deer herd and air quality were litigated from 1985 to 1989 all the way up to the United States Supreme Court, but it seems unlikely that these impacts alone explained the great opposition to the project or the sustained litigation and administrative appeals that took so many years. First, the mule deer herd was seasonally hunted, with baggings of about ten percent of the migratory herd within a given year.[148] The herd would not likely lose greater numbers if the ski resort were to be developed.[149] There is an economic benefit from hunting, but it is not likely to be any greater than the economic benefit from a ski resort. As for the air quality issue, a deterioration in air quality from development was expected regardless of whether the ski resort was built. Indeed, the air controls suggested in the mitigation document would actually improve air quality from the no-action alternative.[150]

Instead, it appears that these were the issues litigated and involved in the administrative negotiation and appeals because they provided the best mechanism to forestall the project, and eventually appeal the granting of the permit. Those opposing the resort claimed (with some justification in prior case law) that the Forest Service had to construct a fail-safe mitigation plan for air quality and the mule deer herd before action could be taken, and the Ninth Circuit agreed. Although this was ultimately rejected as a requirement by the

147. Bill Dietrich, *Ski Resort Plows Toward Reality*, SEATTLE TIMES, Nov. 19, 1989, at B1; *see Robertson*, 490 U.S. at 337, 344-45.

148. *Robertson*, 490 U.S. at 342.

149. *Id.* at 342-43. The EIS recognized that the impact would be greater at times, such as during fawning season, but reported that "mitigation measures" would minimize the impact. *Id.* at 342 & n.7.

150. *Id.* at 339-40.

Supreme Court, it provided a plausible objection that tied up action on the project for more than ten years.[151]

If not mule deer or air quality, what were the concerns of the citizens who opposed the resort? Why did they expend so much energy and money to oppose the project? Were the concerns purely monetary? This seems unlikely since the ski resort would be expected to increase the land values of all of those living in the valley.

I believe the concerns were environmentally related, but related more to environmental risk allocation and environmental philosophy than to the direct preservation of the mule deer herd or air quality.

If one imagines environmental philosophy as the desire to preserve nature without human impact, it is easy to see the impact of this project on the environmental philosophical values of the residents. As stated by the Supreme Court, "[a]t present, Sandy Butte, like the Methow Valley it overlooks, is an unspoiled, sparsely populated area that the District Court characterized as 'pristine.'"[152] In other words, the Methow Valley is a unique area of natural beauty and grandeur, and this may have led to the desire to protect it "in toto." Even if all of the effects to animals and air were mitigated, a very large ski resort would remain that would alter the natural appearance and dynamics of the area, changing or even eliminating a natural tableau from which people might draw strength and sustenance. In the candid words of one resident, "[w]e think the valley is much more of an asset as a beautiful place to come and get away from it all, not in creating another Disneyland."[153]

The coercive aspect of the environmental risk allocation value is also affected. At the level of development proposed by the Forest Service, air quality impact mitigation would require limits on the number of wood burning stoves, and the times they could be used. Moreover, it would require new construction codes that, among other things, would discourage the building of inexpensive summer cabins (because of the requirement of full weatherization).[154] All of these mitigation measures would require people who already live or own property in the area to bear some of the costs of reducing impacts brought about by another party. Without the resort, passage of air

151. *Id.* at 353 & n.16.

152. *Id.* at 337.

153. Dietrich, *supra* note 142, at E1.

154. *Robertson*, 490 U.S. at 340 & n.5.

quality impact mitigation rules that would affect their behavior would have been much less likely to occur.

If the values of environmental risk allocation and environmental philosophy were incorporated into the NEPA analysis, then perhaps these issues could have been satisfactorily addressed by the developer of the resort. Instead of fielding appeals for ten years and preparing numerous studies of the mule deer that were not really central to the people's objections, causing vast expenditures of resources on both sides and ultimately leading to the bankruptcy of the developer, the developer could have considered the true objections. Perhaps the developer could have built a smaller development serving only 2000 skiers, greatly lessening the impact on the natural surroundings, and probably not requiring behavior coercing mitigation measures. Indeed, during the litigation concerning the Early Winters Resort, the nearby Sun Mountain Lodge cross-country ski resort opened and was hailed as a model of an environmentally friendly ski resort.

Although the Methow Valley is indeed spectacular in its grandeur, it is not the only location in our country where people value their natural surroundings or their independence. The concerns faced by the citizens of the Methow Valley, concerns for their unspoiled area and concerns for independence from coercive requirements, are replicated thousands of times across this country. Presumably the incorporation of environmental risk allocation and environmental philosophical values into NEPA would help address these concerns.

VII. Conclusion

Society is often in a state of confusion when projects are delayed or stopped by public outcry based on some environmental "technicality." We often accuse the public of being irrational. We must start with the assumption that people are rational actors within our society. It is simply that what is valuable and important to the public in the environmental context, values concerning how they want their world to be and how they prefer environmental risk to be allocated, are not explicitly being considered.

The language and interpretation of NEPA require that environmental risk allocation and environmental philosophy be considered in the NEPA process. When this occurs, the process of enumerating the environmental costs of a project will become more efficient, environ-

mental protection desired by society will be more readily approximated, our formation and maintenance of environmental norms will be improved, and we as a society will end up with results that better coincide with our community values.